

Claims

What we claim as our invention is:

- 5 1. A method of producing microreinforced concrete members for erection of loaded and/or impervious structures by slurry and/or concrete infiltration in a 3-dimensional mat system, characterized by variation of the mesh width of its single layers (2) in a way, that aggregate (1) can be precisely positioned in size horizontally and/or vertically in the mat system by the sieving effect of its single layers (2).
- 10 2. A method of producing microreinforced concrete members according to claim 1, wherein the aggregate (1), which is positioned precisely between the single layers (2) of the 3-dimensional mat system, performs as spacer and it establishes the stiffness control of the member by variation of grain weight and size.
- 15 3. A method of producing microreinforced concrete members according to claim 1, wherein the single layers (2) of the 3-dimensional mat system consists preferably out of expanded metal, knotted networks, welded or interwoven metal.
- 20 4. A method of producing microreinforced concrete members according to claim 2, wherein the dead-weight of the member can be adjusted precisely by the definition of size and the specific gravity of the aggregate (1), which is positioned between the single layers (2) of the 3-dimensional mat system.

5. A method of producing microreinforced concrete members according to claim 1 to 3, wherein the 3-dimensional mat system with adjustment of thickness will be created by the type and position of the aggregate (1), the quantity of single layers (2), the interconnecting elements (3) and/or by 3-dimensional interweaving (4).

6. A method of producing microreinforced concrete members according to claim 1 to 4, wherein the steel area of the member can be adjusted precisely between 0.5 and 12% by defining the quantity, the screen wire diameter and the mesh width of the single layers (2).

7. A method of producing microreinforced concrete members according to claim 1 to 3, wherein the screen wire diameter of the single layers (2) will be preferably defined from 0.2mm to 2mm.

8. A method of producing microreinforced concrete members according to claim 1 to 3, wherein the mesh width of the single layers (2) will be defined preferably from 3mm to 50mm.

9. A method of producing microreinforced concrete members according to claim 1 to 3, wherein the single layers (2) of the 3-dimensional mat system might consist out of different types of material and different shapes of meshes.

10. A method of producing microreinforced concrete members according to claim 1 to 3, wherein the member can be prestressed precisely by using high-strength steel (5) and by prestressing the single layers (2) in a prestressing bed.